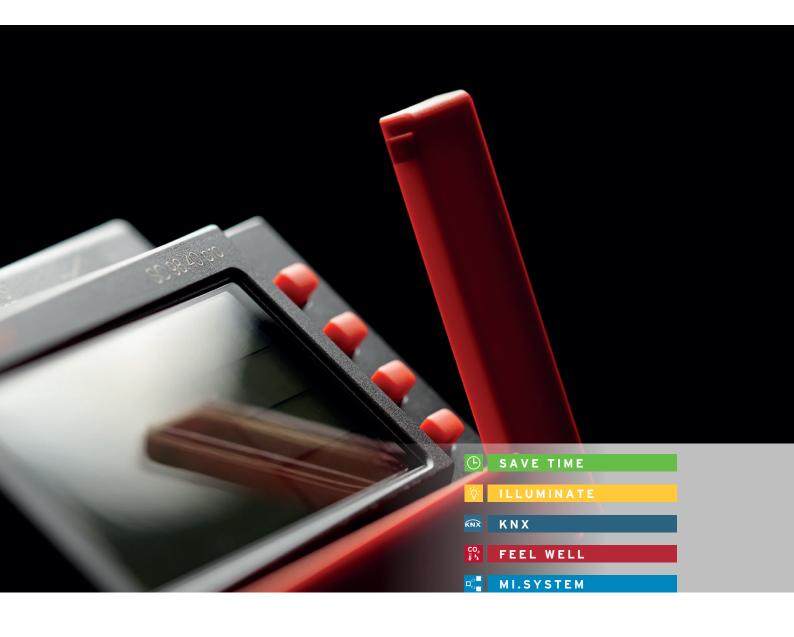
# : h u g o m ü l l e r

switching controlling counting



Compact catalogue

## Compact catalogue 2020-2021

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## thugomüller

#### INNOVATIONAL SPIRIT FROM THE BLACK FOREST

#### 1929 till this day ... and in the future.

The company was founded in 1929 by Hugo Müller. Within a very short time the innovative company had become well known in the locality as a manufacturer of high quality loudspeakers, headphones, radio assembly kits, radios and, some time later, radio time switches.

For Hugo Müller, the change to electronics occurred in 1978, when the first time switch capable of being programmed for a year was introduced to the market. Its success was also virtually pre-programmed – the new product was exceptionally well received.

Today, time switches continue to be an important element of the product range, albeit with features which are subject to continuous improvement. This characteristic reflects the company's objective for the future. The consistent optimization and expansion of the standard product range, including tailormade products to meet individual customers' specific needs.

Our product solution range includes timing devices such as analog and digital timers, master clocks, hour meters, count down timers and light control devices such as analog and digital twilight switches, astronomical time switches, staircase timers, dimmers and also devices for climate control and building automation (KNX).

#### **OEM**

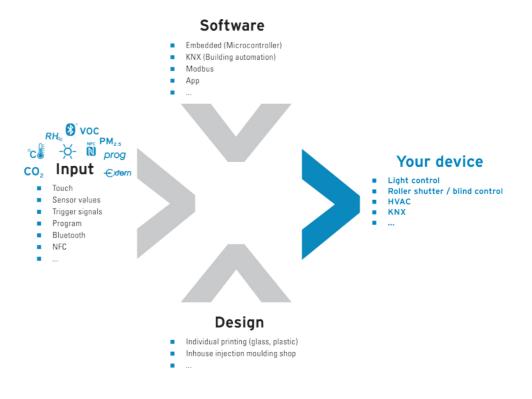
Hugo Müller is your partner whenever you need a customized electro-technical product. We manage the transition from your wishes and vague specifications to well-designed and sellable products.

Hard- and software development, prototyping and serial production are carried-out in our premises. This allows us to advise and support you through the complete development process. Our experts in development and production are efficiently realizing your ideas according to relevant laws, standards and directives. The products are produced with latest technologies and tested with self-made inspection devices. The quality of your product has highest priority.

All products are manufactured in Schwenningen - we offer quality "Made in Germany".

Hugo Müller produces your control and switching devices for time, light, temperature or air quality applications.

For each single problem we'll find a solution. Please contact us, we're happy to talk to you.



# 10011 12:01

## Digital time switches week for DIN-rail mounting



- Daily and weekly program
- Minimum interval 1 min.
- Permanent by date
- Manual permanent mode
- Manual override

Save time

- Variable block programming
- Automatic daylight saving time (Europe, USA, Australia or none)

ı Fla	hazn	time	and	nulse	counte
ı Lıa	มอะน	unie	allu	บนเจษ	Counte

- Pulse function
- Security by PIN-Code
- Text based menu
- Data security through E<sup>2</sup>PROM
- Programmable with PC or Smartphone (see accessories)





- DIN-rail mounting 17.5 mm
- 1 channel / 46 memory locations
- Switching capacity 16 A
- 6 years battery-reserve
- Removable programming module

∎müller	<b>mpaladin</b> by müller	Channels
SC 08.11 pro	172 110 pro	1





- DIN-rail mounting 35 mm
- 1-2 channels / 56 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- Ideal for modern lamps (LED)
- Simple yearly program
- Illuminated display / Display of the switching program

C	a	2	y

∎müller	<b>■paladin</b> by müller	Channels
SC 18.10 easy	170 410 easy	1
SC 18.20 easy	170 420 easy	2
Housing colour		



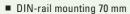


- 1-2 channels / 100 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- Ideal for modern lamps (LED)
- Zero-cross switching (up to 600 W LED load)
- Simple yearly program
- Random function / Cycle function
- Illuminated display / Display of the switching program

## pro4

∎müller	∎paladin Channels by müller	
SC 28.11 pro4	172 411 pro4	1
SC 28.21 pro4	172 421 pro4	2
Housing colour		





- 1-4 channels / 300 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- Ideal for modern lamps (LED)
- Zero-cross switching (up to 600 W LED load)
- Simple yearly program / Astro program
- $\blacksquare$  Random function / Cycle function / External input
- DCF / GPS function
- Illuminated display / Display of the switching program

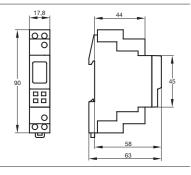
## pro4

∎müller	<b>≡paladin</b> by müller	Channels
SC 88.10 pro4	179 410 pro4	1
SC 88.20 pro4	179 420 pro4	2
SC 88.30 pro4	179 430 pro4	3
SC 88.40 pro4	179 440 pro4	4

Available from July 2020



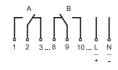




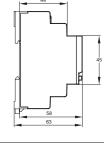




2 channels



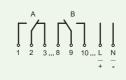


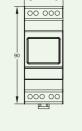


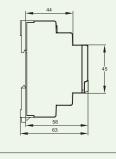


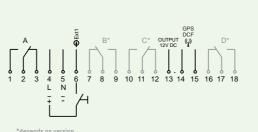


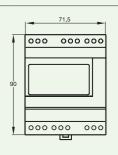
2 channels

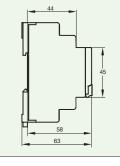












## Digital time switches week - further housing designs

week prog

- Daily and weekly program
- Minimum interval 1 min.
- Permanent by date / holiday function
- Manual permanent mode
- Manual override

Save time

■ Variable block programming

- Automatic daylight saving time (Europe, USA, Australia or none)
- Elapsed time and pulse counter
- Pulse function
- Security by PIN-Code
- Text based menu
- Data security through E<sup>2</sup>PROM

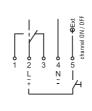




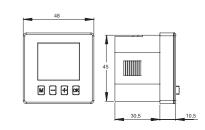
- Switchboard panel mounting
- 1 channel / 46 memory locations
- Switching capacity 8 A
- 4 years battery-reserve
- External input

∎ müller	Channels
SC 24.10 pro	1





1 channel







- Switchboard panel and wall mounting
- 1-2 channels / 46 memory locations
- Switching capacity 16 A
- 10 years battery-reserve
- Programmable with PC (see accessories)
- Data-key function
- Illuminated display

∎ müller	Channels
SC 44.11 pro	1
SC 44.21 pro	2
Z	





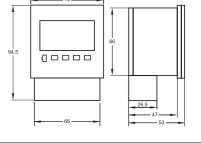
- 1 channel / 56 memory locations
- Switching capacity 10 A
- 10 years battery-reserve
- Programmable with Smartphone
- Ideal for modern lamps (LED)
- Simple yearly program
- Illuminated display / Display of the switching program
- Can be used with many common switch designs

SC 44.11 pro	1
SC 44.21 pro	2
VHousing colour	



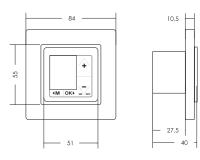
<b>mpaladin</b> by müller	Channels
173 110 easy	1
V Hausing salaur	







2 channels



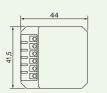


- Flush-mounted fitting
- Universal control unit
- Blinds control
- Time switch (week or astro)
- 2 channels / 100 memory locations
- Switching capacity 6 A
- 10 years battery-reserve
- Programmable with Smartphone
- Up to 50 m range

pro4
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∎müller	Channels
EA 36.22 pro4	2
Housing colour	







### Digital time switches astro

- Astro program: Automatic switching according to the position of the sun
- Economical night program
- Minimum interval 1 min.
- Manual permanent mode
- Manual override
- Automatic sorting of switching times



- Automatic daylight saving time (Europe, USA, Australia or none)
- Security by PIN-Code
- Ideal for modern lamps (LED, CFL, etc.)
- Data security through E<sup>2</sup>PROM
- Programmable with PC or Smartphone (see accessories)







- Digital time switch astro with weekly program
- DIN-rail mounting 17.5 mm
- 1 channel / 60 memory locations
- Switching capacity 16 A
- 6 years battery-reserve
- Removable programming module
- Extra switching times (weekly time function)

müller	<b>■ paladin</b> by müller	Channels
C 08.13 pro	172 113 pro	1
Housing colour		



- Digital time switch astro with daily program
- DIN-rail mounting 35 mm
- 1 channel / 4 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- Illuminated display
- Display of the switching program

easy
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müller	<b>mpaladin</b> by müller	Channels
SC 18.13 easy	170 413 easy	1
Hausing calour		





- Digital time switch astro with weekly program
- DIN-rail mounting 35 mm
- 1-2 channels / 56 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- Extra switching times (weekly timer function)
- Illuminated display / Display of the switching program

03	CV
60	$\supset V$

pro4

easy

∎müller	<b>■paladin</b> by müller	Channels
SC 18.14 easy	170 414 easy	1
SC 18.24 easy	170 424 easy	2
SU 18.24 easy	170 424 easy	

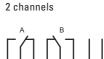
m paladin





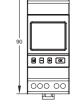
1 channel

1 channel

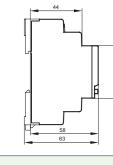


2 channels





M B 8 🖎



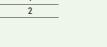




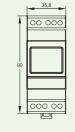
- Digital time switch astro with weekly program
- DIN-rail mounting 35 mm
- 1-2 channels / 100 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- Zero-cross switching (up to 600 W LE
- Extra switching times (weekly timer
- Illuminated display / Display of the switching program

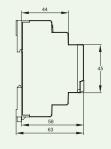
eable battery		by muller	
ED load)	SC 28.13 pro4	172 413 pro4	
function)	SC 28.23 pro4	172 423 pro4	
vuitahina program	Housing colour		

**m** müller











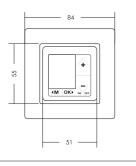


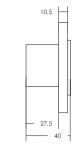
- Digital time switch astro with weekly program
- Flush-mounted fitting
- 1 channel / 56 memory locations
- Switching capacity 10 A
- 10 years battery-reserve
- Extra switching times (weekly timer function)
- Illuminated display / Display of the switching program
- Can be used with many common switch designs

Channels

■ paladin by müller	Channels
173 113 easy	1
Housing colour	







## Digital time switches year

year prog

- Daily, weekly and yearly program
- Yearly program with Easter function, Weekday function and extra-switching time function
- Minimum interval 1 min.
- Permanent by date / holiday function / Man. permanent mode
- Manual override
- Variable block programming
- Automatic daylight saving time (Europe, USA, Australia or none)
- Elapsed time and pulse counter
- Pulse function
- Security by PIN-Code
- Text based menu
- Illuminated display
- Data security through E<sup>2</sup>PROM
- Programmable with PC or Smartphone (see accessories)

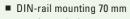




- DIN-rail mounting 35 mm
- 1 channel / 300 memory locations
- Switching capacity 16 A
- 10 years battery-reserve
- Data-key function
- Cycle function
- DCF / GPS function
- Up to 300 permanent switchings by date

∎müller	<b>mpaladin</b> by müller	Channels
SC 28.19 pro	172 419 pro	1
VIIIi		





- 1-4 channels / 300 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- Ideal for modern lamps (LED)
- Zero-cross switching (up to 600 W LED load)
- Century program / Astro program
- Random function / Cycle function / External input
- DCF / GPS function
- $\blacksquare$  Illuminated display / Display of the switching program

## pro4

∎müller	<b>mpaladin</b> by müller	Channels
SC 98.10 pro4	179 610 pro4	1
SC 98.20 pro4	179 620 pro4	2
SC 98.30 pro4	179 630 pro4	3
SC 98.40 pro4	179 640 pro4	4

Available from July 2020

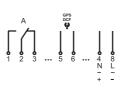


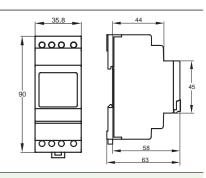


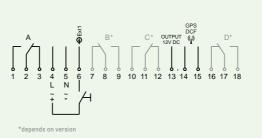
- 19"-housing
- 2 or 4 channels / 300 memory locations
- Switching capacity 5 A
- 10 years battery-reserve
- Data-key function
- Cycle function
- DCF / GPS function
- Up to 300 permanent switchings by date

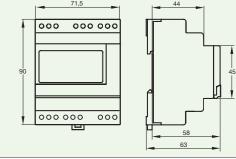
∎ müller	Channels
SC 93.20 pro	2
SC 93.40 pro	4
Housing colour	

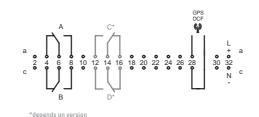


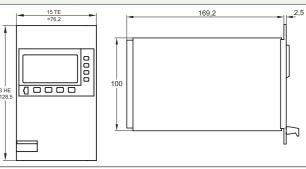












## Masterclocks for DIN-rail mounting

- masterclocks ■ Short-circuit proof slave-clock-line
- Automatic adjustment of slave clocks
- Automatic time correction of slave clocks after supply voltage interruption
- Automatic daylight saving time (Europe, USA, Australia or none) with 60 additional pulses or pulse suppression for 1 hour of the slave-clock-line
- Monitoring of slave-clock-line and malfunction indicator in display
- Security by PIN-Code
- Illuminated display
- DCF / GPS function
- 10 years battery-reserve (time switch)
- Data security through E<sup>2</sup>PROM



- DIN-rail mounting 70 mm
- 1 slave-clock line for approx. 5 slave clocks (24 VDC, 35 mA, pole changing pulse)

∎müller	Slave clock lines	Channels
SC 58.07 pro	1	_
Housing colour		



- DIN-rail mounting 70 mm
- 1 slave-clock line for slave clocks up to 250 V~
- A pulse amplifier is not needed

∎müller	Slave clock lines	Channels
SC 58.08 pro	1	-



- DIN-rail mounting 70 mm
- 1 slave-clock line for approx. 20 slave clocks (24 VDC, 150 mA, pole changing pulse)
- Time Switch: Weekly timer / 1 channel

müller	Slave clock lines	Channels
SC 58.17 pro	1	1
Housing colour		

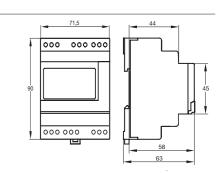


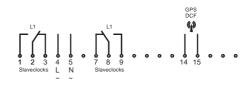
- DIN-rail mounting 140 mm
- 1 slave-clock line for approx. 40 slave clocks (24 VDC, 300 mA, pole changing pulse)
- Time Switch: Yearly timer / 4 channels

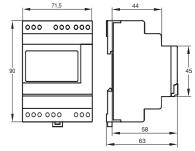
∎müller	Slave clock lines	Channels
SC 98.47 pro	1	4
Housing colour		



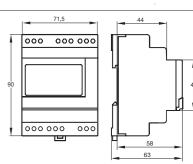


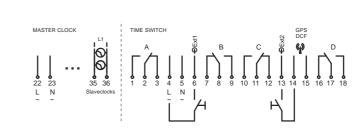


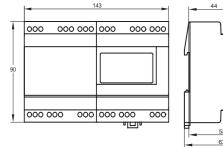


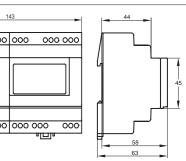












## Masterclocks pluggable into 19"-housing

masterclocks L

- Short-circuit proof slave-clock-line
- Automatic adjustment of slave clocks
- Automatic time correction of slave clocks after supply voltage interruption
- Automatic daylight saving time (Europe, USA, Australia or none) with 60 additional pulses or pulse suppression for 1 hour of the slave clock-line
- Monitoring of the slave-clock-line and malfunction indicator in display
- Security by PIN-Code
- Illuminated display
- DCF / GPS function
- 10 years battery-reserve (time switch)
- Data security through E<sup>2</sup>PROM



- 15 TE / 3 HE [128.5 x 76.2 mm]
- 2 slave-clock output-lines for approx. 200 slave clocks (24 VDC, 1,5 A, pole changing pulse)
- Output-line 2 adjustable to a pulse repetition rate of one per sec.
- Ext. 24 VDC power supply unit required / power supply unit for slave clocks not included
- Time Switch: Weekly timer / 1 channel

∎müller	Slave clock lines	Channels
SC 53.17 pro	2	1



- 15 TE / 3 HE [128.5 x 76.2 mm]
- 1 slave-clock output-line for approx. 200 slave clocks (24 VDC, 1,5 A, pole changing pulse)
- Ext. 24 VDC power supply unit required / power supply unit for slave clocks not included
- Time Switch: Yearly timer / 4 channels

müller	Slave clock lines	Channels
C 93.47 pro	1	4
Hamaian autom		



- 15 TE / 3 HE [128.5 x 76.2 mm]
- Accessory for 19"master clocks
- Power supply 19"-housing
- Power supply of slave clocks
- Output current 1.5 A

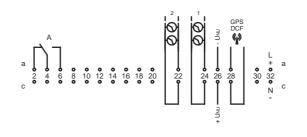
∎müller	Output voltage
NT 73.24 pro	24 V DC
Housing colour	

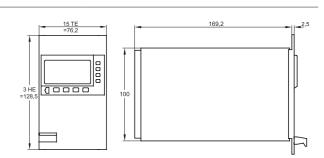


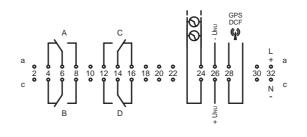
- 84 TE / 2 HE [483 x 86 x 203 mm]
- 1 slave-clock output-line for approx. 200 slave clocks (24 VDC, 1,5 A, pole changing pulse)
- No extra power supply unit needed / integrated 24 VDC power supply unit
- Frontswitch (potential-free) can be used to control an arbitrary application
- Time Switch: Yearly timer / 4 channels

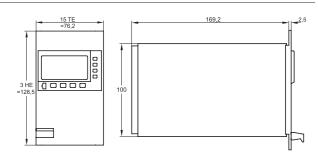
∎müller	Slave clock output lines	Channels
SC 95.47 pro	1	4
Housing colour		

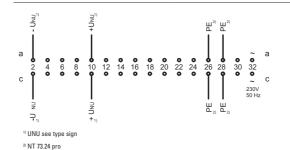


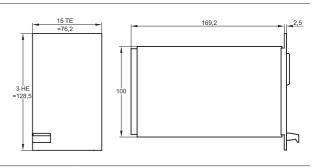


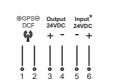










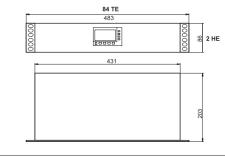












### analogue Analogue time switches

- Daily or weekly program
- Manual override switch [Permanent ON / Permanent OFF / Automatic]
- Timers with power back-up: Power reserve approx. 100 h
- Captive setting keys
- Easy to read switching program





- DIN-rail mounting 17.5 mm
- Daily program
- Switching capacity 16 A
- Minimum switching interval 15 min.

by muller	∎müller	Version
111 120	<sup>™</sup> VS 10.18	Day without reserve
114 120	<sup>™</sup> VS 14.18	Day with reserve



- DIN-rail mounting 35 mm and wall mounting
- Daily program
- Switching capacity 16 A
- Minimum switching interval 30 min.
- Minute pointer

<b>■ paladin</b> by mülle	<sub>er</sub> ∎müller	Version
151 220	<sup>™</sup> VS 20.18	Day without reserve
154 220	<sup>™</sup> VS 24.18	Day with reserve
Housing colour	A Setting key colour	







- Switching capacity 16 A
- Minimum switching interval day dial 30 min.
- Minimum switching interval week dial 2 h.
- Analogue display [with hands]

∎paladin by müll	<sub>er</sub> ∎müller	Version
131 120	<sup>™</sup> VS 30.18	Day without reserve
134 120	<sup>™</sup> VS 34.18	Day with reserve
131 420	<sup>™</sup> VS 30.38	Week without reserve
134 420	✓ VS 34.38	Week with reserve

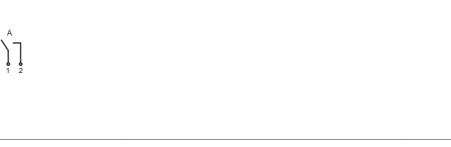


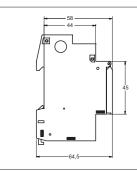


- Switchboard panel and wall mounting
- Daily or weekly program
- Switching capacity 16 A
- Minimum switching interval day dial 15 min.
- Minimum switching interval week dial 1 h.
- Analogue display [with hands]

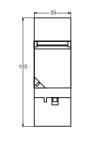
<b>■ paladin</b> by mülle	<sub>r</sub> ∎müller	Version
161 120	FS 60.18	Day without reserve
164 120	FS 64.18	Day with reserve
161 420	FS 60.38	Week without reserve
164 420	FS 64.38	Week with reserve
Housing colour	Setting key colour	

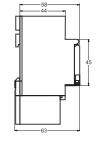






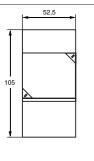


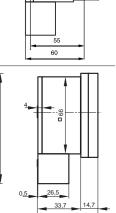












63

### **Hour counters**

# 2345h

#### Hour counters for panel mounting

- Alternating Current or Direct Current versions
- With universal connections
- Touch proof connections according to VBG 4

#### Hour counters for DIN-rail mounting

- Alternating Current or Direct Current versions
- Screw terminals (pull-up type)
- Touch proof connections according to VBG 4





- Panel mounting
- Integral locking spring
- Mounting aperture: 50x25 mm
- Counter capacity 99,999 h.
- With operation indicator
- Type of protection front IP 65

müller	Version
BW 30.18	Alternating current
BG 30.18	Direct current



- Panel mounting
- Retaining Clip in delivery included
- Mounting aperture square: 45x45 mm
- Mounting aperture circle: ø 50,5 mm
- Counter capacity BW 99,999 h.
- Counter capacity BG 999,999 h.
- With operation indicator
- Type of protection front IP 50 (with ring seal 100.003: IP 54)

∎müller	Version
BG 40.17	Direct current
BW 40.18	Alternating current
BG 40.27	Direct current, with trim 55x55 mm
BW 40.28	Alternating current, with trim 55x55 mm
BG 40.37	Direct current, with mask 72x72 mm
BW 40.38	Alternating current, with mask 72x72 mm
Housing colour	



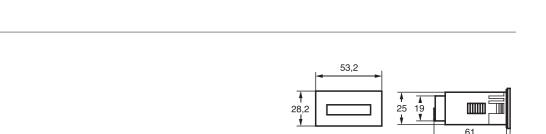
- DIN-rail mounting 17,5 mm
- Flush mount dimensions 45x17,5 mm
- Slim format
- No terminal cover
- Counter capacity 99,999 h.
- With operation indicator
- Type of protection IP 50

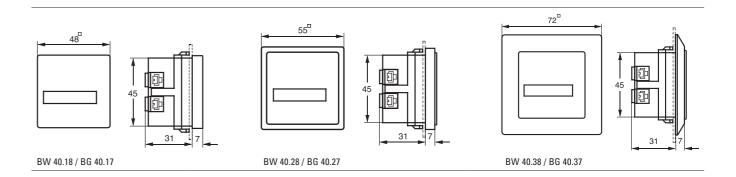
∎müller	<b>mpaladin</b> by müller	Version
BW 70.18	311 170	Alternating current
BG 70.18	312 170	Direct current

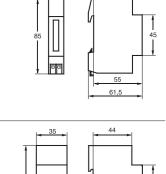


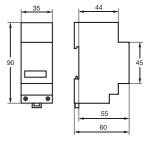
- DIN-rail mounting 35 mm
- Flush mount dimensions 45x35 mm
- Bx 70.29: without terminal cover
- Bx 70.89: with terminal cover
- One Version for 50 and 60 Hz
- Counter capacity 99,999 h.
- With operation indicator (flashing LED)
- Type of protection IP 50

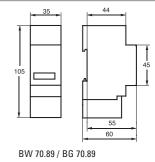
∎müller	<b>≖paladin</b> by müller	Version
BW 70.29	311 270	Alternating current
BG 70.29	312 270	Direct current
BW 70.89*	311 280*	Alternating current
BG 70.89*	312 280*	Direct current
Housing colour		* with terminal cover











BW 70.29 / BG 70.29

# Countdown timers 🖔

Save time



- 1 channel / change-over relay
- Minimum interval 1 sec.
- Input for start and stop (230 VAC)
- Optical and acoustic signal on completion of time

# Digital multifunctional relays

- 1 channel / change-over relay
- Minimum interval 0.1 sec.
- External input
- 20 different functions
- Extended range of functions
- Data security through E<sup>2</sup>PROM





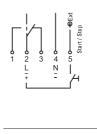
- Timer
- Panel mounting
- Switching capacity 8 A
- Max. time TC 14 9:59:59 h:mm:ss
- Max. time TC 24 99:59:59 hh:mm:ss
- Repeatability accuracy 100%
- Different trims available (see accessories)

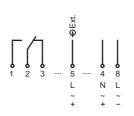
müller	Range
ΓC 14.21	9:59:59 h:mm:ss
ΓC 24.21	99:59:59 hh:mm:ss
Mauring galaur	

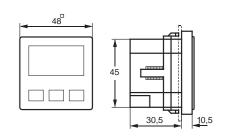


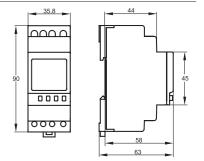
- Digital multifunctional relay
- DIN-rail mounting 35 mm
- Switching capacity 16 A
- Time range 000:00:00:1 to 999:59:59:9 hhh:mm:ss:1/10s

∎ müller	Range
MR 28.10 pro	999:59:59:9 hhh:mm:ss:1/10s
Mousing colour	









## Staircase lighting timers

- Manual override for timed or permanent lighting
- 3- or 4-conductor cabling
- Resettable
- Time delay: 284 210: 30 sec. to 20 min. 284 250: 1 min. to 12 min.

# staircase

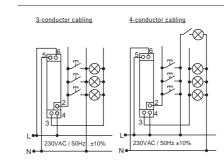
- Glow lamp load: up to 100 mA
- 284 250: Advanced warning function included
- Zero-cross switching for relay-saving switching

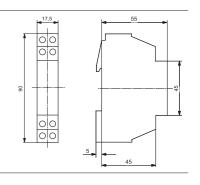




- Staircase lighting timer
- Electronic
- DIN-rail mounting 17.5 mm
- Switching capacity 16 A
- Zero-cross switching

<b>mpaladin</b> by müller	Special function	Time delay
284 210		30 sec. to 20 min.
284 250	Advance warning	1 min. to 12 min.
Housing colour		





: hugomüller

## Twilight switches

- Digital twilight switches ■ Suitable for modern lamps (LED, CFL, etc.)
- Adjustable lux threshold
- Adjustable delay times
- Adjustable light-hysteresis
- With weekly timer function (e.g. for energy saving)

## lux

#### Analogue twilight switches

- Suitable for modern lamps (LED, CFL, etc.)
- Adjustable lux threshold
- Data security through E<sup>2</sup>PROM





- Digital twilight switch
- DIN-rail mounting 35 mm
- Switching capacity 16 A
- Adjustable lux threshold 1-50,000 Lux
- Twilight switch with daily program
- Permanent switchings by date

■ paladin by müller	Channel
972 413 pro	
Z	





- DIN-rail mounting 35 mm
- Switching capacity 16 A
- Adjustable lux threshold 1-50,000 Lux
- Twilight switch with daily, weekly and yearly program
- Permanent switchings by date
- Programmable with PC and Smartphone (see accessories)
- External input

<b>■ paladin</b> by müller	Channels
972 414 pro	1



- Analogue twilight switch
- Wall mounting
- Switching capacity 16 A
- Adjustable lux threshold 3-300 Lux

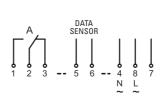
<b>■ paladin</b> by müller	Channels
922 000	1
Housing colour	

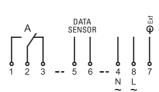


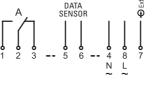
Analogue twilight switch

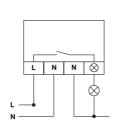
- DIN-rail mounting 17.5 mm
- Adjustable lux threshold 1-1,000 Lux

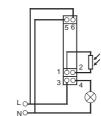
<b>■ paladin</b> by müller	Sensor Chann	els
923 500	sensor for wall mounting	1
923 501	sensor for mounting within housing	1
Housing colour		

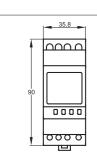




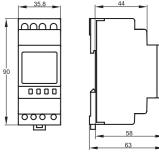


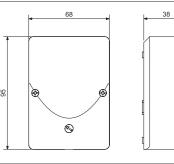


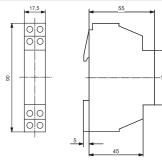












- Switching capacity 16 A

## Dimmers for flush-mounted fitting



- For pushbuttons
- Installation in standard boxes behind a pushbutton possible
- Small design (13 mm)
- Easy to connect
- Memory function
- Protection against overload, short circuit and overheat



- RLC Dimmer
- With litz wires and ferrules
- Load 15-400 W
- Suitable for leading or trailing edge

<b>■ paladin</b> by müller	Suitable for
873 010 rlc	RLC
Hausing aslaur	



- LED Dimmer
- With litz wires and ferrules
- Load leading edge 4-100 W
- Load trailing edge 4-350 W

■ paladin by müller	Suitable for
873 030 led	LED



- LED Dimmer without neutral wire With litz wires and ferrules
- Load leading edge 4-80 W
- Load trailing edge 4-200 W
- Compensator included in delivery

<b>■ paladin</b> by müller	Suitable for
873 031 led	LED
Housing colour	





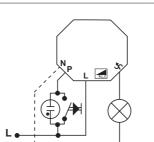
- LED Dimmer
- With screw terminals
- Load leading edge 4-100 W
- Load trailing edge 4-350 W

<b>■ paladin</b> by müller	Suitable for
872 032 led	LED

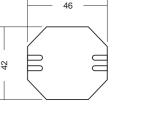


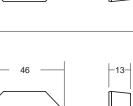
- LED Strips Dimmer
- With litz wires and ferrules
- Pulse Width Modulation technology (PWM) 12-48 V DC
- LED strips up to 8 A
- Amplifier available (see accessories)

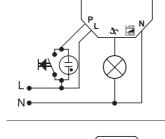
<b>■ paladin</b> by müller	Suitable for
879 040 led	LED Strips
Housing colour	

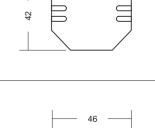


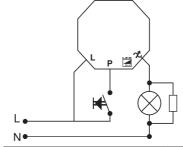


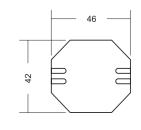


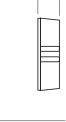


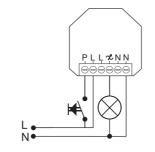


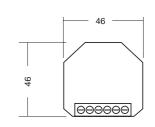


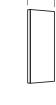


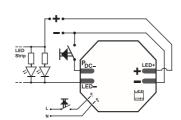


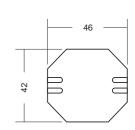














## Dimmers for DIN-rail mounting



- Universal dimmer or TRIAC Dimmer
- Master-Slave-function: With the inclusion of further dimmers higher loads can be controlled with one single pushbutton connection (Master)
- Memory function
- Protection against overload, short circuit and overheat





- LED Dimmer / Universal Dimmer
- DIN-rail mounting 17.5 mm
- LED-Load leading edge 4-100 W
- LED-Load trailing edge 4-350 W

<b>mpaladin</b> by müller	Suitable for
872 110 led	RLC, LED & CFL
Housing colour	

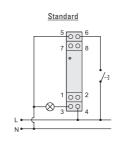


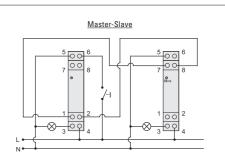


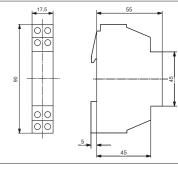
- TRIAC Dimmer for dimmable LED lamp
- DIN-rail mounting 87.5 mm
- Up to 1,200 W peak load per dimmer
- For leading edge
- Further functions for a flexible usage: Potentiometer (internal or external), pushbutton operation, 0–10 V signal

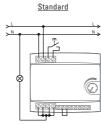
■ paladin by müller	Suitable for
879 410 led	LED
Housing colour	





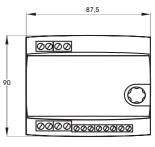


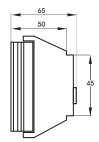




#### Further installation options

- Operation with pushbutton, includes control of slaves (Master-Slave installation)
- Operation with potentiometer (internal / external)
- Operation with 0-10 V signal
- 3-phase-installation controlled by potentiometer and extension with slaves





KNX

KNX-TP

## KNX Universal interfaces for flush-mounted fitting



- ETS with many advantages:
  - Simple programming and operation
  - Various adjustment and control options
  - Logical, simple and clearly structured software
- Compact housing

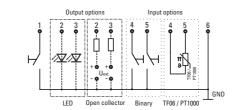


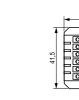
- 3 configurable inputs
- 2 binary outputs (LED drivers / open-collector)
- Integrated room temperature control
- External temperature sensor available (see accessories)

∎müller	Inputs	Outputs
EA 36.32 knx	3	2

#### Following functions and data available via KNX bus:

- Binary and analog inputs / push-button interface (switching, dimming, temperature probe/-limiter, etc.)
- Binary outputs
- Temperature control







KNX-TP

KNX

## KNX Time switches for DIN-rail mounting



- ETS with many advantages:
  - Simple programming and operation
  - Various adjustment and control options
  - Logical, simple and clearly structured software
- DCF / GPS function



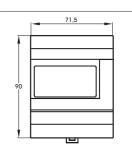
- DIN-rail mounting 70 mm
- 4 channels / 300 memory locations
- Daily, weekly and yearly program
- Data-key function (see accessories)
- Programmable with PC (see accessories)

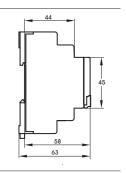
∎müller	Channels
SC 98.40 knx	4
Hausing galaus	

Following functions and data available via KNX bus:

- Time dependent switching (switching, valuator, scene control, HVAC,...)
- Logic gates
- Time standard







switching controlling counting

#### switching controlling countin

# KNX Actuators for wall mounting

# KNX

- ETS with many advantages:
  - Simple programming and operation
  - Various adjustment and control options
  - Logical, simple and clearly structured software
- Compact housing

KNX



	■ Buzzer ■ Up to 3 configurable input objects ■ Adjustable volume level (quite, medium, loud) ■ Adjustable sequence	■ müller Version  AS 10.00 knx Buzzer  PV Housing colour	Wall mounting (without accessory)  Wall mounting (without accessory)  So x 55 mm with mounting palter 200.002 (see accessories)  Wouldoor installation with mounting angle 200.002 (see accessories)
--	---------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

# KNX-TP

## KNX Outdoor sensors for wall mounting

- Sensors suitable for outdoor use (IP 54)
- Ideal for use as twilight switches
- Wall mounting







- Light- / brightness sensor
- Lighting control
- Daily time switch

müller	Sensor
LS 20.00 knx	Lux



- Light and temperature sensor
- Lighting and temperature control
- Daily time switch

∎ müller	Sensor
LS 30.00 knx	Lux, T
Housing colour	

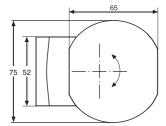


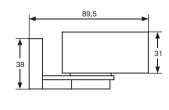
- GPS Sensorstation
- Lighting and temperature control
- Daily and astro time switch
- Provides time base to KNX bus

<b>m</b> üller	Sensor
FU 40.00 knx	GPS, Lux, T
V	

#### Following functions and data available via KNX bus:

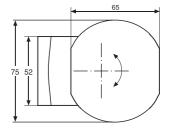
- Time switch (standard)
- Light control

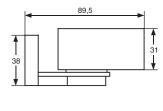




#### Following functions and data available via KNX bus:

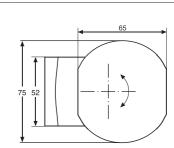
- Time switch (standard)
- Light control
- Temperature control

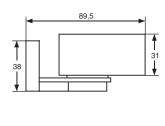




#### Following functions and data available via KNX bus:

- Time switch (standard)
- Time switch (astro)
- Light control
- Temperature control
- GPS coordinates and sunlight-data
- Time standard





KNX-TP

KNX

## KNX Room temperature-/room climate controls mini



- Products for KNX installations
- Room temperature- and room climate controls (air quality sensors) for indoor use
- Compact housing

- Various functions and options configurable via ETS (depending on model):
  - Threshholds for temperature, humidity, VOC-concentration
  - PI- and 2-point control





■ Temperature control

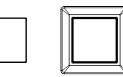
Sensor for temperature

Sensor ∎müller TS 10.00 knx

Following functions and data available via KNX bus:

Following functions and data available

■ Temperature control



Wall mounting

Integrated in switch design 55 x 55 mm with mounting plate

200.001 (see accessories)



Outdoor installation with mounting angle 200.002 (see accessories)



vacuum cup 200.003



- Temperature control and hygrostat
- Sensors for temperature, humidity and atmospheric pressure

■ müller Sensor GS 10.00 knx RH, T

■ Rel. humidity control Dewpoint

via KNX bus:

■ Temperature control

- Air pressure
- VAV control



(without accessory)



55 x 55 mm with mounting plate mounting angle 200.002 (see accessories) (see accessories)



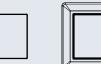
vacuum cup 200.003 (see accessories)



- Climate control
- Sensors for VOC, temperature, humidity and atmospheric pressure

∎müller Sensor GS 20.00 knx VOC, RH, T Following functions and data available via KNX bus:

- Temperature control ■ Rel. humidity control
- VOC control
- Dewpoint
- Air pressure
- VAV control



Wall mounting (without accessory)



Integrated in switch design 55 x 55 mm with mounting plate 200.001 (see accessories)



mounting angle 200.002 (see acces





vacuum cup 200.003

## KNX

## KNX Room temperature-/room climate controls for wall mounting



- Products for KNX installations
- Room temperature- and room climate controls (air quality sensors) for indoor use
- Modern and planar design

- Various functions and options configurable via ETS (depending on model):
  - Threshholds for temperature, humidity, CO<sub>2</sub>-concentration, VOC-concentration and particulate matter concentration PM<sub>2.5 µm</sub>
  - PI- and 2-point control





TS 31.10 knx

- Temperature control
- Sensor for temperature
- Up to 5 binary and analogue inputs
- Additional function TS 31.10 knx: Manual adjustment of set-point temperature ±3°C

∎müller	Version	Sensor
TS 30.10 knx		T
TS 31.10 knx	T manual ±3°	T
Housing colour		



GS 31.10 knx

- Temperature control and hygrostat
- Sensors for temperature, humidity and atmospheric pressure
- Up to 5 binary and analogue inputs
- Additional function GS 31.10 knx: Manual adjustment of set-point temperature ±3°C

∎müller	Version	Sensor
GS 30.10 knx		RH, T
GS 31.10 knx	T manual ±3°	RH, T
Housing colour		



GS 41.00 knx

- Air quality sensor / air quality control
- Sensors for CO<sub>2</sub>, temperature, humidity and atmospheric pressure
- Additional function GS 41.00 knx: Manual adjustment of set-point temperature ±3°C

∎müller	Version	Sensor
GS 40.00 knx		CO <sub>2</sub> , RH, T
GS 41 00 kny	T manual +3°	CO. RH T



GS 41.10 knx

- Air quality sensor & control
- Sensors for CO<sub>2</sub>, temperature, humidity and atmospheric pressure
- Up to 5 binary and analogue inputs
- Additional function GS 41.10 knx: Manual adjustment of set-point temperature ±3°C

∎müller	Version	Sensor
GS 40.10 knx		CO <sub>2</sub> , RH, T
GS 41.10 knx	T manual ±3°	CO <sub>2</sub> , RH, T



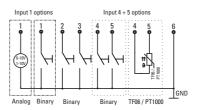
GS 70.00 knx

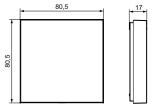
- Sensor for particulate matter / Air quality sensor
- Room climate control
- Sensors for particulate matter, VOC, temperature, humidity and atmospheric pressure

∎müller	Sensor
GS 70.00 knx	PM <sub>2.5</sub> , VOC, RH, T
Housing colour	

#### Following functions and data available via KNX bus:

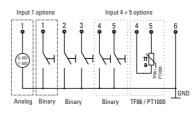
- Temperature control
- Binary and analogue inputs

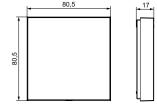




#### Following functions and data available via KNX bus:

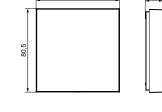
- Temperature control
- Rel. humidity control
- Binary and analogue inputs
- Dewpoint
- Air pressure
- VAV control





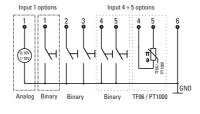
#### Following functions and data available via KNX bus:

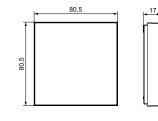
- Temperature control
- Rel. humidity control
- CO<sub>2</sub> control
- Dewpoint
- Air pressure
- VAV control



#### Following functions and data available via KNX bus:

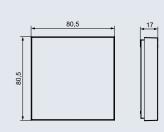
- Temperature control
- Rel. humidity control
- CO<sub>2</sub> control
- Binary and analogue inputs
- Dewpoint
- Air pressure
- VAV control





### Following functions and data available via KNX bus:

- Temperature control
- Rel. humidity control
- Particulate matter control
- VOC control
- Dewpoint
- Air pressure
- VAV control



## KNX Dimmers for DIN-rail mounting



- Products for KNX installations
- Panic funktion
- Memory function
- Protection against overload, short circuit and overheat
- Scene control
- Control knob for dimming function test - even without KNX-bus connected
- DIN-rail mounting 87,5 mm

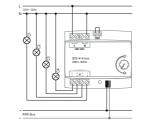


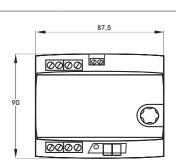


- Dimming actuator for RLC and LED
- 4 channels with up to 300 W per channel
- Load leading edge 4-120 W
- Load trailing edge 4-250 W
- Up to 1200 W total load
- Channels are independently controllable / dimmable

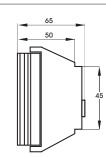
<b>■ paladin</b> by müller	Suitable for
879 414 knx	RLC & LED
Hausing colour	







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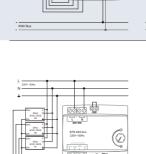
- Dimming actuator for dimmable RGBW LED strips
- 4 channels with up to 10 A per channel
- Pulse width modulation (PWM) 12 48 V DC
- Configurable as 4 single colored LED strips dimmer
- RGB + W or RGBW LED strips

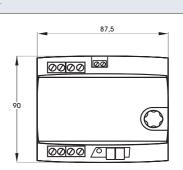
■ paladin by müller	Suitable for
879 424 knx	LED Strips
Housing colour	



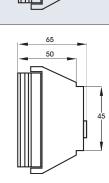
- Dimming actuator / DALI gateway for DALI drivers and ballasts (ECG's)
- 3 channels up to 64 ballasts per channel
- Max. 128 devices in total
- 1 group per channel ■ Broadcast communication

■ paladin by müller	Suitable for
879 443 knx	DALI
Moueing colour	





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KNX-RFS

KNX

## KNX-RF S-mode products for flush-mounted fitting

- Products for KNX installations
- KNX-RF 1.R S-mode
- Input for wired push-buttons
- Protection against overload, short circuit and overheat
- RF-repeater function
- Scene control
- Staircase lighting timer function
- Cycle function



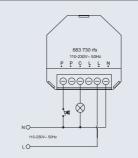


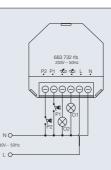


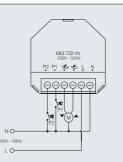


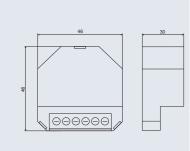
- Switching actuator
- 1 -2 channels
- Switching capacity 16 A / 250 V
- Functions:
- switching (on / off)
- timer
- blind control (2 channels 683 732rfs)

<b>m paladin</b> by müller	Channels
683 730 rfs	1
683 732 rfs	2







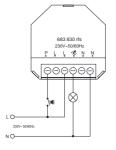


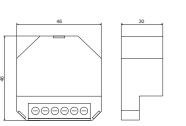




- Dimming actuator for RLC and LED lights
- LED-Load leading edge 4-100 W
- LED-Load trailing edge 4–250 W
- Memory function

paladin by müller	Suitable for
83 830 rfs	RLC & LED



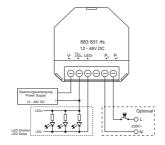


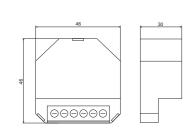




- Dimming actuator for LED strips up to 12-48 V
- Pulse width modulation (PWM) 12-48 V DC
- LED strips up to 8 A (12V: 96 W, 24V: 192 W)
- Memory function

paladin by müller	Suitable for
83 831 rfs	LED Strips



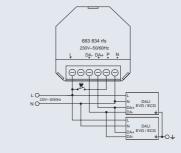


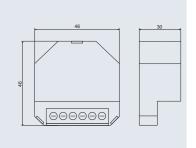




- Dimming actuator for DALI ballasts
- Broadcast communication
- Memory function

<b>paladin</b> by müller	Suitable for
683 834 rfs	DALI
Zu · ·	





## KNX-RF S-mode senders and sensors

- Products for KNX installations
- KNX-RF 1.R S-mode

KNX

- Test mode for quick status request
- Battery operated (lifetime approx. 8 years)



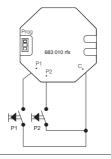


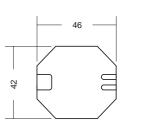




- Pushbutton interface / sender
- 2 binary inputs (configurable)
- Sensor for temperature
- Adjustable alarm conditions
- Input for up to 2 wired push buttons for RF transmission

■ paladin by müller	Version
683 010 rfs	2 inputs

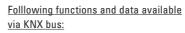




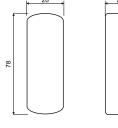


- Sensor for temperature, light and humidity
- Adjustable alarm conditions

<b>■ paladin</b> by müller	Senso
686 312 rfs	Lux, RH, 1
Housing colour	



- Brightness control
- Temperature control
- Rel. humidity control





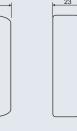
■ Door- / window contact sensor

by müller	Selisui
686 410 rfs	Door- / window contact
Mauring colour	

Following functions and data available
via KNX bus:
Change of status (open / closed)







Feel well

switchina controllina countin

Climato

## Room climate controls Modbus & Analogue

## climate

- Sensors for indoor use (IP 20)
- Modbus-Modes (ASCII / RTU) configurable
- Compact housing (wall-mounting)
- Adjustable baud rate
- Adjustable parities

.m Gifer		
Modbon'		

- Sensor for temperature
- Control output (0-10 V) for measured values of temperature

∎ müller	Sens
TS 30.00 mod	



- Sensor for temperature
- Sensor for humidity
- Sensor for atmospheric pressure
- 2 control outputs (0-10 V) for measured values of relative humidity and temperature

∎müller	Sensor
GS 30.00 mod	RH, T



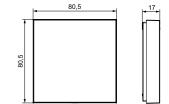
- Sensor for CO<sub>2</sub>
- Sensor for temperature
- Sensor for humidity
- Sensor for atmospheric pressure
- 3 control outputs (0-10 V) for measured values of CO<sub>2</sub>-concentration, relative humidity and temperature

∎müller	Sensor
GS 40.00 mod	CO <sub>2</sub> , RH, T
Housing colour	



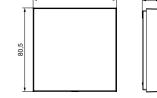
Following registers available via Modbus:

■ Temperature



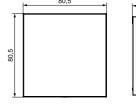
Following registers available via Modbus:

- Temperature
- Rel. humidity
- Dew point
- Absolute atmospheric air pressure



Following registers available via Modbus:

- Temperature
- Rel. humidity
- CO<sub>2</sub>
- Dew point
- Absolute atmospheric air pressure



: hugomüller

mi.system

Bluetooth system

mi.system

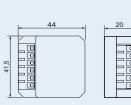
- Multifunctional devices (remote control) for flush mounting
- Directly programmable with Smartphone (Bluetooth)
- Range of 75 m



- Universal control unit
- Blinds control
- Time switch (week or astro)
- Clock thermostat (with LS 20.00 pro4)
- Hygrostat (with LS 20.00 pro4)
- 2 channels / 100 memory locations
- Switching capacity 6 A
- 10 years battery reserve

<b>m</b> üller	Channels
EA 46.22 pro4	2
Housing colour	



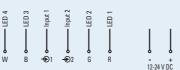


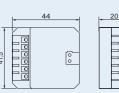




- LED Strips Dimmer with time program
- Pulse Width Modulation technology (PWM) 12-24 V DC
- LED strips up to 8 A
- 10 years battery reserve

<b>m</b> m üller	Suitable for
EA 56.42 pro4	LED Strips





switching controlling counting

## **Bluetooth System**

- Sensor as accessory for mi.puck system EA 46.22 pro4
- Range of 75 m

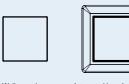
# mi.system



- Sensor for light / brightness
- Sensor for temperature
- Sensor for humidity
- Exchangeable battery (included) / battery operated (lifetime approx. 6 years)
- To be used with mi.puck system (EA 46.22 pro4)

Sensor ∎müller LS 20.00 pro4 Lux, RH, T Following datas available via mi.puck

- Brightness value
- Temperature value
- Rel. humidity value



(without accessory)



55 x 55 mm with mounting plate mounting angle 200.002 vacuum cup 200.003







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Rights to technical amendments reserved - Page 49

## Save'n carry App

- Free app for programming easy and pro4 time switches
- Remote control for mi.system products
- Pro4 products can be programmed directly with Smartphone via Bluetooth
- Easy products can be programmed directly with Smartphone via NFC



- Easy and fast programming via Smartphone or tablet
- Reading and writing to the time switch without additional accessories
- Intuitive user interface
- Send programs directly via WhatsApp, e-mail, iMessage,
- Save and send programs as pdf-document











Bx 40 / TC x4 / SC 24.10 pro



Trim 55 x 55 for Bx 40 / TC x4 / SC 24.10 pro Order number 190.003



Mask 72 x 72 for Bx 40 / TC x4 / SC 24.10 pro Order number 190.004



∎müller

Save'n carry App

Mask ø 72 (mounting-ø 60) for Bx 40 / TC x4 / SC 24.10 pro Order number 190.008



Self-adhesive seal (anti-twist protection) for Bx 40 / TC x4 / SC 24.10 pro

Order number 101.001



IP54-Seal for Bx 40 / TC x4 / SC 24.10 pro Order number 101.003



Retaining clip for Bx 40 / TC x4 Order number 715.003

Bx 30 / Bx 70.29

Mounting accessories for LS 20.00 pro4, KNX mini housings



Retaining clip for Bx 30 Order number 715.005



Mounting plate for wall box Order number 200.001



Mounting angle for outdoor installation Order number 200.002



Terminal cover for Bx 70.29 Order number 003.008 Order number 003.010



Vacuum cup Order number 200.003 Accessories



Data-key

Accessory for devices of the pro-series and SC 98.40 knx

■ Suitable for programming package Save'n carry PP 50.00 pro and PP 60.00 pro

∎müller	Description
DK pro	Data-key
Mousing colour	



■ Programming package Save'n carry

Accessory for devices of the pro-series and SC 98.40 knx

■ For easily programming of switching times at your PC or Smartphone (Android, only PP 60.00 pro)

∎ müller	Interface
PP 50.00 pro	USB
PP 60.00 pro	USB, Bluetooth
Hausing colour	



■ Radio receiver DCF-Time

Accessory for devices of the pro- / pro4-series and SC 98.40 knx

■ Wall mounting

Connection wire specifications: 2-wire, no shield, variable core cross-section

■ Reception and output of the DCF 77 telegram

∎müller		
FU 20.00 pro		
77		



■ Radio receiver GPS-Time

Accessory for devices of the pro- / pro4-series and SC 98.40 knx

■ Wall mounting

■ Connection wire specifications: 3-wire, no shield, variable core cross-section

■ Reception and processing of GPS time signal

∎müller	Version
FU 30.00 pro	without power supply
FU 35.00 pro	power supply for DIN-rail included



Amplifier for LED strips

Flush-mounted fitting

■ LED strips up to 8 A

■ Combinable with dimmer paladin 873 040 led, 673 831 rf and 674 830 rf

suitable for
LED strips



■ External temperature sensor / probe TF06

■ Connects to analogue input of:

GS 4x.10 knx GS 3x.10 knx, TS 3x.10 knx EA 36.32 knx

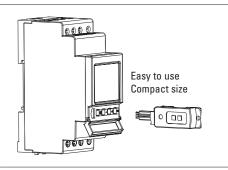
■ Measuring range: -15...+70°C

■ Sensor NTC 10 kOhm, nominal length 28 mm, diameter 7,7 mm

■ Cable: 4 m PVC/PVC black (H03 VV-F)

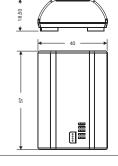
■ Type of protection: IP 65

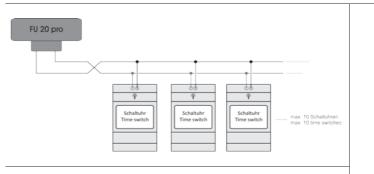


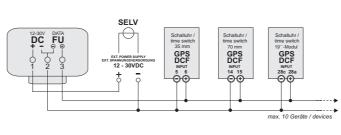


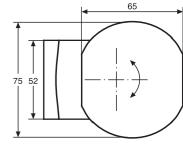


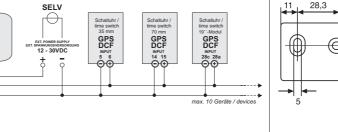


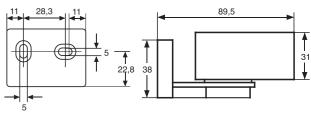


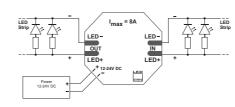


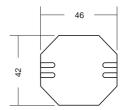


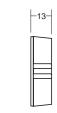












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also at: www.hugo-mueller.com

# hugomüller

## switching controlling counting

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